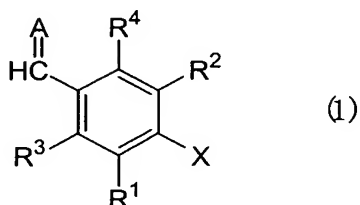


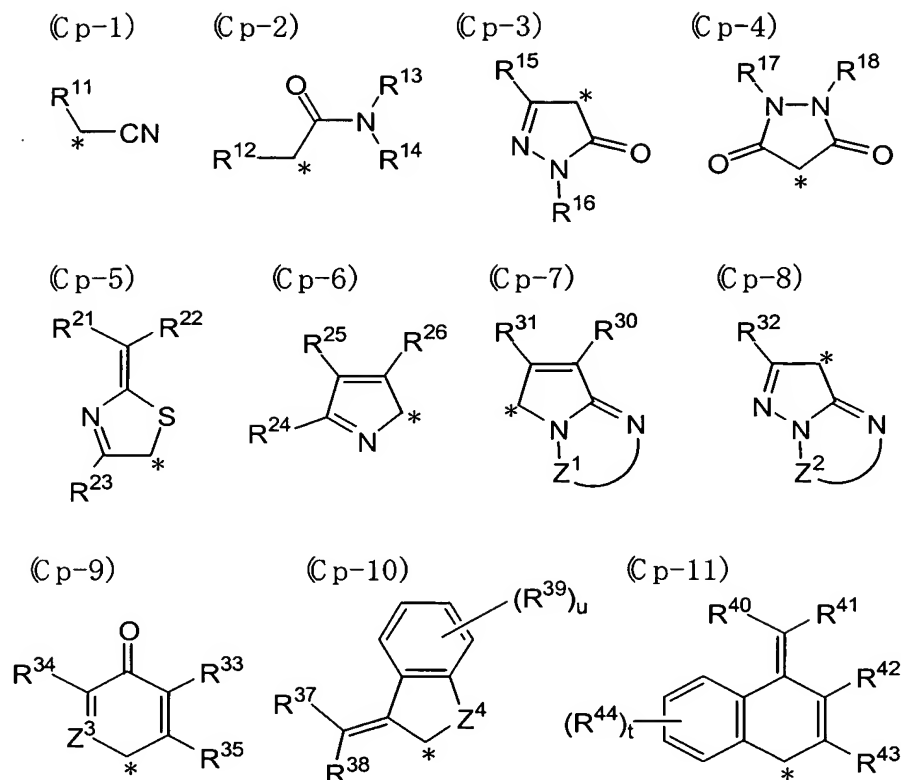
What is claimed is:

1. A hair dye composition comprising a dissociative direct dye represented by the following formula (1):



wherein,  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  each independently represents a hydrogen atom or a substituent, and X represents a hydroxyl group or  $-NHSO_2R^5$ , in which  $R^5$  represents an alkyl, aryl or heterocyclic group, with the proviso that each of the groups may have one or more substituents; and A represents a divalent group capable of forming a methine dye as a whole compound together with the portion other than A.

2. A hair dye composition of Claim 1, wherein A in the dissociative direct dye (1) is a group represented by any one of the following formulas (Cp-1) through (Cp-11):



(in formulas (Cp-1) through (Cp-11), \* is a position bonding to the benzyldiene group in formula (1),

in formula (Cp-1),  $R^{11}$  represents a cyano group, acyl group, aryl group, heterocyclic group or group  $-C(R^{101})=C(R^{102})-R^{103}$ , in which  $R^{101}$ ,  $R^{102}$  and  $R^{103}$  each independently represents a hydrogen atom or a substituent with the proviso that at least one of  $R^{102}$  and  $R^{103}$  is an electron attracting group having a Hammett  $\sigma_p$  value of 0.1 or greater,

in formula (Cp-2),  $R^{12}$  represents a cyano, acyl, alkoxycarbonyl, carbamoyl, aryl or heterocyclic group, and  $R^{13}$  and  $R^{14}$  each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-3),  $R^{15}$  represents a hydrogen atom or an alkyl, aryl, heterocyclic, amino, alkylamino, arylamino, heterocyclic amino, alkoxy, acylamino, alkoxycarbonylamino, ureido, alkoxycarbonyl, carbamoyl or cyano group, and  $R^{16}$

represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-4),  $R^{17}$  and  $R^{18}$  each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-5),  $R^{21}$  and  $R^{22}$  each independently represents a cyano, carbamoyl, alkoxy carbonyl, alkylsulfonyl or arylsulfonyl group, and  $R^{23}$  represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-6),  $R^{24}$ ,  $R^{25}$  and  $R^{26}$  each independently represents a hydrogen atom or a substituent,

in formula (Cp-7),  $R^{30}$  and  $R^{31}$  each independently represents a hydrogen atom or a substituent, and  $Z^1$  represents an atomic group necessary for the formation of a 5- or 6-membered ring together with  $N-C=N$ ,

in formula (Cp-8),  $R^{32}$  represents a hydrogen atom or a substituent, and  $Z^2$  represents an atomic group necessary for the formation of a 5- or 6-membered ring together with  $N-C=N$ ,

in formula (Cp-9),  $R^{33}$ ,  $R^{34}$  and  $R^{35}$  each independently represents a hydrogen atom or a substituent,  $Z^3$  represents a nitrogen atom or  $-C(R^{36})=$ ,  $R^{36}$  representing a hydrogen atom or a substituent, with the proviso that when  $Z^3$  represents  $-C(R^{36})=$ ,  $R^{34}$  and  $R^{36}$  may be coupled to form a 5-membered or 6-membered ring,

in formula (Cp-10),  $R^{37}$  and  $R^{38}$  each independently represents a cyano, carbamoyl, alkoxy carbonyl, alkylsulfonyl or arylsulfonyl group,  $R^{39}$  represents a hydrogen atom or a substituent,  $u$  stands for an integer of from 0 to 4, and  $Z^4$  represents  $-SO_2-$  or  $-SO-$ , and

in formula (Cp-11),  $R^{40}$  and  $R^{41}$  each independently represents a cyano, carbamoyl, alkoxy carbonyl, alkylsulfonyl or arylsulfonyl group,  $R^{42}$ ,  $R^{43}$  and  $R^{44}$  each independently represents a hydrogen atom or a substituent, and  $t$  stands for an integer of

from 0 to 4, with the proviso that the above-described groups may have one or more substituents.)

3. A hair dye composition of Claim 1, wherein  $R^1$  and  $R^2$  in the dissociative direct dye (1) are each a hydrogen or halogen atom, or an alkyl, cyano, acylamino, ureido, alkoxycarbonylamino, aryloxy carbonylamino, sulfamoylamino, alkylsulfonylamino, arylsulfonylamino, alkoxycarbonyl, sulfamoyl or carbamoyl group.

4. A hair dye composition of Claim 1, wherein  $R^3$  and  $R^4$  in the dissociative direct dye (1) are each a hydrogen atom, a halogen atom, or an alkyl or acylamino group which may be substituted.

5. A hair dye composition of Claim 1, wherein X in the dissociative direct dye (1) is a hydroxyl group or  $-NHSO_2R^5$ , in which  $R^5$  is an alkyl group which may be substituted.

6. A hair dye composition of Claim 2, wherein A in the dissociative direct dye (1) is a group (which may have one or more substituents) selected from the groups represented by:

formula (Cp-1) in which  $R^{11}$  is a cyano group, acyl group, heterocyclic group or group  $-C(R^{101})=C(R^{102})-R^{103}$ ,

formula (Cp-2) in which  $R^{12}$  is a cyano group, aryl group or heterocyclic group and  $R^{13}$  and  $R^{14}$  are each a hydrogen atom, alkyl group or aryl group, with the proviso that at least one of  $R^{13}$  and  $R^{14}$  represents a hydrogen atom,

formula (Cp-3) in which  $R^{15}$  is an alkyl, amino, alkylamino, arylamino, heterocyclic amino, alkoxy, acylamino, alkoxycarbonylamino, ureido, alkoxycarbonyl, carbamoyl or cyano group, and  $R^{16}$  is an aryl or heterocyclic group,

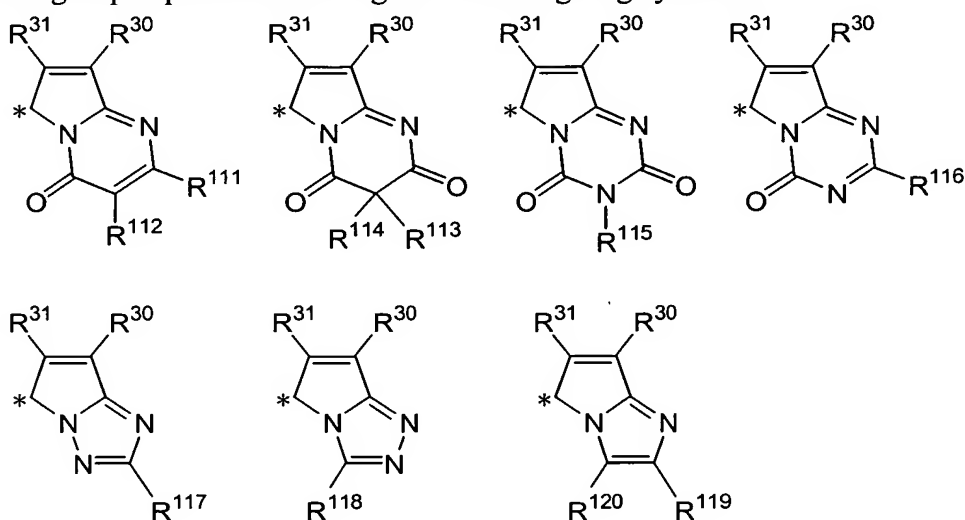
formula (Cp-4) in which  $R^{17}$  and  $R^{18}$  are each an alkyl or aryl group,

formula (Cp-5) in which  $R^{21}$  and  $R^{22}$  are each a cyano, carbamoyl or

alkoxycarbonyl group, and  $R^{23}$  is a hydrogen atom, alkyl group or alkyl group,

formula (Cp-6) in which  $R^{24}$  is a hydrogen atom or an aryl, acylamino, alkylsulfonylamino or arylsulfonylamino group, and  $R^{25}$  and  $R^{26}$  are each a hydrogen atom or an aryl, alkoxycarbonyl, carbamoyl, alkylsulfonyl, arylsulfonyl or cyano group,

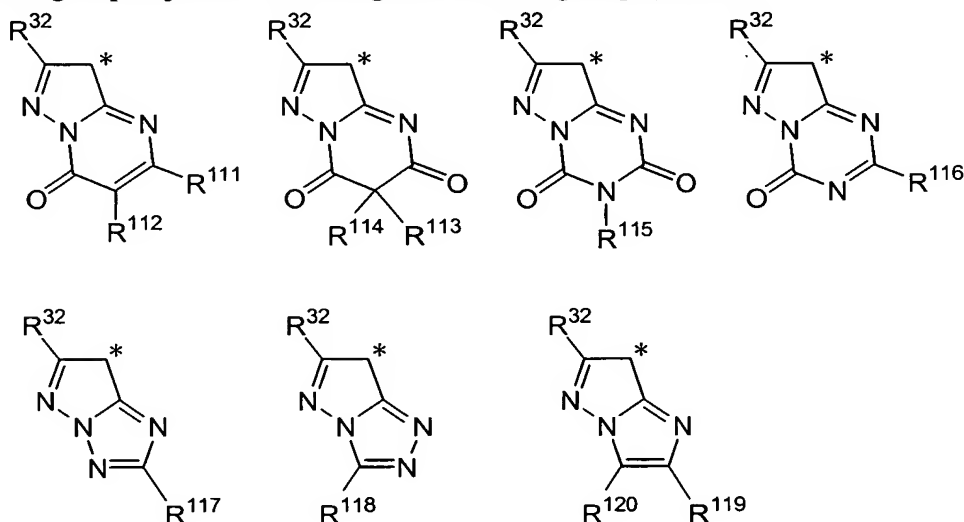
5 formula (Cp-7) in which  $R^{30}$  and  $R^{31}$  are each a hydrogen atom or an alkyl, aryl, heterocyclic, alkoxycarbonyl, carbamoyl, alkylsulfonyl, arylsulfonyl or cyano group, and  $Z^1$  is a group capable of forming the following ring systems:



wherein,  $R^{111}$  represents a hydrogen atom or an alkoxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxycarbonylamino, aryloxycarbonylamino, sulfamoylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio, arylthio or heterocyclic thio group,  $R^{112}$  represents a hydrogen or halogen atom, or an alkyl, acyl, carbamoyl or alkoxycarbonyl group,  $R^{113}$  and  $R^{114}$  each independently represents a hydrogen atom or an alkyl group,  $R^{115}$  represents a hydrogen atom or an alkyl group, and  $R^{116}$  represents a hydrogen atom or an alkyl, aryl, alkoxy, aryloxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxycarbonylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio or arylthio group,  $R^{117}$  and  $R^{118}$  each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group, and

$R^{119}$  and  $R^{120}$  each independently represents a hydrogen atom or an alkyl, aryl, heterocyclic, acyl, alkoxy carbonyl or carbamoyl group or they may be coupled together to form a benzene ring,

formula (Cp-8) in which  $R^{32}$  is a hydrogen atom or an alkyl, aryl, heterocyclic, alkoxy carbonyl, carbamoyl, alkylsulfonyl, arylsulfonyl or cyano group, and  $Z^2$  is a group capable of forming the following ring systems:



in which,  $R^{111}$  to  $R^{120}$  have the same meanings as described above,

formula (Cp-9) in which  $Z^3$  is  $-C(R^{36})=$ ,  $R^{36}$  represents a hydrogen atom or an acylamino group,  $R^{33}$  and  $R^{34}$  are each a hydrogen atom, a halogen atom, an alkyl group or acylamino group, and  $R^{35}$  is a hydrogen atom or an alkyl group; or in which  $Z^3$  is  $-C(R^{36})=$ , and  $R^{34}$  and  $R^{36}$  are coupled together to form a benzene ring which may be substituted with a halogen atom or an amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxy carbonylamino, alkylsulfonylamino or arylsulfonylamino group,

formula (Cp-10) in which  $R^{37}$  and  $R^{38}$  are a cyano or alkoxy carbonyl group,  $R^{39}$  is a hydrogen or halogen atom or an alkyl, aryl, alkoxy, aryloxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxy carbonylamino,

alkylsulfonylamino, arylsulfonylamino, alkylthio or arylthio group, u is an integer of from 0 to 2, and  $Z^4$  is  $-SO_2-$ , and

formula (Cp-11) in which  $R^{40}$  and  $R^{41}$  are each a cyano or alkoxycarbonyl group, and  $R^{42}$ ,  $R^{43}$  and  $R^{44}$  are each a hydrogen or halogen atom or an alkyl, aryl, alkoxy, aryloxy, amino, acylamino, ureido, alkoxycarbonylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio or arylthio group.

7. A hair dye composition of Claim 2 or 6, wherein A in the dissociative direct dye (1) is a group represented by formula (Cp-1), (Cp-2), (Cp-3), (Cp-4) or (Cp-8).